IN THE CLAIMS:

Please cancel Claims 6, 17 and 28 without prejudice or disclaimer of subject matter. The claims, as pending in the subject application, now read as follows:

1. (Currently amended) A method of transforming device-dependent color values in a device-dependent color space of a color input device to device-independent color values inside a human visual gamut in a device-independent color space, comprising the steps of:

providing a mathematical model for converting device-dependent color values in a device-dependent color space of the color input device to device-independent color values in the device-independent color space;

converting an input device-dependent color value in the device-dependent color space generated by the color input device into a device-independent color value in the device-independent color space using the mathematical model;

determining whether or not the device-independent color value has a luminance component less than zero;

when it is determined that the luminance component is less than zero, performing the following steps:

clipping the luminance component to zero; and

setting chromaticity components of the device-independent color value to zero; and

when it is determined that the luminance component is not less than zero, performing the following steps:

determining whether or not the device-independent color value is

outside the human visual gamut in the device-independent color space; and

when it is determined that the device-independent color value is outside the human visual gamut, clipping the device-independent color value to another device-independent color value in the device-independent color space on a boundary of the human visual gamut

wherein the boundary of the human visual gamut corresponds to the CIE spectral locus on a chromaticity space.

2. and 3. (Canceled)

4. (Previously presented) The method according to Claim 1, wherein the luminance component of the device-independent color value is not clipped at an upper bound in the clipping wherein the luminance component of the device-independent color value is allowed to take a value higher than a diffuse white point of the device-independent color space.

5. (Previously presented) The method of Claim 1, wherein clipping the device-independent color value further comprises mapping the device-independent color value outside the human visual gamut to an intersection between a line defined by the device-independent color value and a white point and a boundary of the human visual gamut.

6. (Canceled)

7. (Currently amended) The method of Claim 1 [[6]], wherein the chromaticity space is the CIE chromaticity xy plane.

8. (Currently amended) The method of Claim 1 [[6]], wherein the chromaticity space is the CIE Uniform Chromaticity Scale (UCS) u'v' plane.

9. (Previously presented) The method of Claim 1, wherein the device-independent color space is CIEXYZ.

10. (Previously presented) The method of Claim 1, wherein the device-independent color space is CIELUV.

11. (Previously presented) The method of Claim 1, wherein the device-independent color space is CIELAB.

12. (Previously presented) A data processing system for transforming device-dependent color values in a device-dependent color space of a color input device to device-independent color values inside a human visual gamut in a device-independent color space, comprising:

a processor;

a memory coupled to the processor, the memory having program instructions executable by the processor stored therein, the program instructions comprising:

providing a mathematical model for converting device-dependent color values in a device-dependent color space of the color input device to device-independent color values in the device-independent color space;

converting an input device-dependent color value in the device-dependent color space generated by the color input device into a device-independent color value in the device-independent color space using the mathematical model;

determining whether or not the device-independent color value has a luminance component less than zero;

when it is determined that the luminance component is less than zero, performing the following steps:

clipping the luminance component to zero; and

setting chromaticity components of the device-independent color value to zero; and

when it is determined that the luminance component is not less than zero, performing the following steps:

determining whether or not the device-independent color value is outside the human visual gamut in the device-independent color space; and

when it is determined that the device-independent color value is outside the human visual gamut, clipping the device-independent color value to another device-independent color value in the device-independent color space on a boundary of the human visual gamut

wherein the boundary of the human visual gamut corresponds to the CIE spectral locus on a chromaticity space.

13. and 14. (Canceled)

15. (Previously presented) The data processing system of Claim 12, wherein the luminance component of the device-independent color value is not clipped at an upper bound in the clipping wherein the luminance component of the device-independent color value is allowed to take a value higher than a diffuse white point of the device-independent color space.

16. (Previously presented) The data processing system of Claim 12, wherein clipping the device-independent color value further comprises mapping the device-independent color value outside the human visual gamut to an intersection between a line defined by the device-independent color value and a white point and a boundary of the human visual gamut.

17. (Canceled)

18. (Currently amended) The data processing system of Claim 12 [[17]], wherein the chromaticity space is the CIE chromaticity xy plane.

19. (Currently amended) The data processing system of Claim 12 [[17]], wherein the chromaticity space is the CIE Uniform Chromaticity Scale (DCS) u'v' plane.

20. (Previously presented) The data processing system of Claim 12, wherein the device-independent color space is CIEXYZ.

21. (Previously presented) The data processing system of Claim 12, wherein the device-independent the color space is CIELUV.

22. (Previously presented) The data processing system of Claim 12, wherein the device-independent color space is CIELAB.

23. (Currently amended) A computer-readable medium having program instructions for transforming device-dependent color values in a device-dependent color space of a color input device to device-independent color values inside a human visual gamut in a device-independent color space , comprising the steps of:

providing a mathematical model for converting device-dependent color values in a device-dependent color space of the color input device to device-independent color values in the device-independent color space;

converting an input device-dependent color value in the device-dependent color space generated by the color input device into a device-independent color value in the device-independent color space using the mathematical model;

determining whether or not the device-independent color value has a luminance component less than zero;

when it is determined that the luminance component is less than zero, performing the following steps:

clipping the luminance component to zero; and

setting chromaticity components of the device-independent color value to zero; and

when it is determined that the luminance component is not less than zero, performing the following steps:

determining whether or not the device-independent color value is outside the human visual gamut in the device-independent color space; and

when it is determined that the device-independent color value is outside the human visual gamut, clipping the device-independent color value to another device-independent color value in the device-independent color space on a boundary of the human visual gamut

wherein the boundary of the human visual gamut corresponds to the CIE spectral locus on a chromaticity space.

24. and 25. (Canceled)

26. (Previously presented) The computer-readable medium of Claim 23, wherein the luminance component of the device-independent color value is not clipped at an upper bound in the clipping wherein the luminance component of the device-independent color value is allowed to take a value higher than a diffuse white point of the device-independent color space.

27. (Previously presented) The computer-readable medium of Claim 26, wherein clipping the device- independent color value further comprises mapping the device-independent color value outside the human visual gamut to an intersection between a line defined by the device-independent color value and a white point and a boundary of the human visual gamut.

28. (Canceled)

29. (Previously presented) The computer-readable medium of Claim 28, wherein the chromaticity space is the CIE chromaticity xy plane.

30. (Previously presented) The computer-readable medium of Claim 28, wherein the chromaticity space is the CIE Uniform Chromaticity Scale (UCS) u'v' plane.

31. (Previously presented) The computer-readable medium of Claim 23, wherein the device-independent color space is CIEXYZ.

32. (Previously presented) The computer-readable medium of Claim 23, wherein the device-independent color space is CIELUV.

33. (Previously presented) The computer-readable medium of Claim 23, wherein the device-independent color space is CIELAB.